

# Miniature Unmanned Air Vehicles

## B R I G H A M Y O U N G U N I V E R S I T Y

### CENTER

The main focus of the Center is the development of technologies to extend the capabilities of autonomous miniature air vehicles (AMAVs, also referred to as UAVs) and to license those technologies which are commercially viable. Current UAV technology is large, expensive, hard to fly, and can only be produced in small quantities. The Center's technology provides great improvement with small, inexpensive, easy to fly UAVs that can be mass produced. The vision of the Center is to enable AMAV's to realize their potential in a wide array of commercial markets due to their ease of deployment, flight and cost advantages.

### TECHNOLOGY

The Center is advancing a variety of technologies centered on the AMAV. They have extended the capabilities of their previously developed autopilot technology to include auto-takeoff and auto-land, enabling each AMAV to be completely autonomous, eliminating the need for radio control.

In addition to new technologies such as a pan and tilt camera and hand-held user interface, the Center is developing vector field-precision path following capabilities as well as vertical take-off flight control for rotorcraft and tail sitter vehicles. New airframes have also been developed that are inexpensive and include an integrated camera.

### ACCOMPLISHMENTS

This year, the Center spun out a second company, Flying Sensors (Bountiful, UT), and filed two additional patent applications for their video stabilization and target location software. Flying Sensors develops commercial applications for small UAVs in areas such as real estate and facility monitoring. Additional technology has been licensed to the Center's first spinout, Procerus Technologies, and the pan-tilt camera system and hand-held user interface are now ready for licensing.

The Center continues to receive recognition for its work and co-directors, Randy Beard and Tim McLain, were awarded the Brigham Young University Technology Transfer Award.

### THINK TANK

What if there was...



**A miniature plane that could be flown to monitor traffic without the need to leave the office?**

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